Author Index, Volume 21

Acierno, D., LaMantia, F. P., DeCindio, B., and Nicodemo, L.: Transient Shear and Elongational Data for Polyisobutylene Melts, 261
Ahrens, F. W. and Goldstein, C.: Viscous Dissipation in the Flow Between Eccentric Rotating Disks (Orthogonal Rheometer), 207
Agrawal, P. K., Lee, W. K., Lorntson, J. M., Richardson, C. I., Wissbrun, K. F., and Metzner, A. B.: Rheological Behavior of Molten Polymers in Shearing and in Extensional Flows, 355

Baid, K. M. and Metzner, A. B.: Rheological Properties of Dilute Polymer Solutions Determined in Extensional and in Shearing Experiments, 237
Binnington, R.: See Boger, D. V.
Boger, D. V. and Binnington, R.: Separation of Elastic and Shear Thinning Effects in the Capillary Rheometer, 515
Boger, D. V. and Huilgol, R. R.: A Note on the Interpretation of Exit Pressure Measurements, 447
Bogue, D. C.: See Matsui, M.
Bogue, D. C.: See Matsumoto, T.

Cancio, L. V.: See Shroff, R. N.
Chankraiphon, S.: See White, J. L.
Charrier, J. M. and Li. Y. K.: Large Elastic Deformation Theories and Unstable Deformations of Rubber Structures: Thick Tubes, 301
Christensen, R. M.: A Thermodynamical Criterion for the Glass-Transition Temperature, 163
Cohen, R. E. and Sawada, Y.: A Note on the Extension of the Contour Plotting Method for Representing Linear Viscoelastic Loss Properties of SBS Triblock Copolymers, 157
Crawley, R. L. and Graessley, W. W.: Geometry Effects on Stress Transient Data Obtained by Cone and Plate Flow, 19

DeCindio, B.: See Acierno, D.

Fewell, M. E. and Hellums, J. D.: The Secondary Flow of Newtonian Fluids in Cone-and-Plate Viscometers, 535
Fillers, R. W. and Tschoegl, N. W.: The Effect of Pressure on the Mechanical Properties of Polymers, 51
Fukushima, S.: See Komatsu, H.

Goldstein, C.: See Ahrens, F. W.
Graessely, W. W.: See Crawley, R. L.

Han, C. D.: See Khan, A. A.
Hellums, J. D.: See Fewell, M. E.
Hill, C. T.: See Maschmeyer, R. O.
Huilgol, R. R.: See Boger, D. V.
Ide, Y.: See White, J. L.

Khan, A. A. and Han, C. D.: A Study on the Interfacial Instability in the Stratified Flow of Two Viscoelastic Fluids Through a Rectangular Duct, 101
Komatsu, H., Takahashi, M., and Fukushima, S.: Viscoelastic Properties of Water-in-Oil Cream, 219
Kremesec, V. J. and Slattery, J. C.: The Apparent Sress-Deformation Behavior of a Dilute Suspension of Spheres in a Power Model Fluid, 469

LaMantia, F. P.: See Acierno, D.
Lee, W. K.: See Agrawal, P. K.
Li, Y. K.: See Charrier, J. M.
Lorntson, J. M.: See Agrawal, P. K.

Malhotra, R. C.: See Sharma, R. S.
Markovitz, H.: Boltzmann and the Beginnings of Linear Viscoelasticity, 381
Maschmeyer, R. O. and Hill, C. T.: Rheology of Concentrated Suspensions of Fibers in Tube Flow. II. An Exploratory Study, 183
——: Rheology of Concentrated Suspensions of Fibers in Tube Flow. III. Suspensions with the Same Fiber Length Distribution, 195
Masuda, T.: See Takahashi, M.
Matsui, M. and Bogue, D. C.: Studies in Non-Isothermal Rheology, 133
Matsumoto, T. and Bogue, D. C.: Non-Isothermal Rheological Response During Elongational Flow, 453
Matzner, M., Noshay, A., and McGrath, J. E.: Effect of Hard Segment Chemical Structure on the Processibility of Organo-Siloxane Block Copolymers, 273
McGrath, J. E.: See Matzner, M.
Metzner, A. B.: See Agrawal, P. K.
Metzner, A. B.: See Baid, K. M.
Mhaskar, R. D., Shah, Y. T., and Pearson, J. R. A.: On the Stability of Flow in Channels with a Moving Boundary: The Mold Filling Problem, 291

Nicodemo, L.: See Acierno, D.
Noshay, A.: See Matzner, M.

Onogi, S.: See Takahashi, M.

Pearson, J. R. A.: See Mhaskar, R. D.

Richardson, C. I.: See Agrawal, P. K.

Sawada, Y.: See Cohen, R. E.
Schrag, J. L.: Deviation of Velocity Gradient Profiles from the "Gap Loading" and "Surface Loading" Limits in Dynamic Simple Shear Experiments, 399
Seshadri, V.: See Sharma, R. S.
Shah, Y. T.: See Mhaskar, R. D.
Sharma, R. S., Seshadri, V., and Malhotra, R. C.: Effect of Polymer Additives on the Process of Transition, 415
Shida, M.: See Shroff, R. N.
Shroff, R. N. and Shida, M.: Significance Predicting the First Normal Stress Difference and the Dynamic Moduli from the Steady-Flow Viscosity, 327
Shroff, R. N., Cancio, L. V., and Shida, M.: Extensional Flow of Polymer Melts, 429
Slattery, J. C.: See Kremesec, V. J.

Takahashi, M.: See Komatsu, H.
Takahashi, M., Masuda, T., and Onogi, S.: New Critical Tests for Integral Constitutive Equations, 337
Tschoegl, N. W.: See Fillers, R. W.

White, J. L., Chankraiphon, S., and Ide, Y.: Rheological Behavior and Flow Patterns Around Agitators in Polymer Solutions, 1
Wissbrun, K. F.: Non-Uniqueness of Determination of Molecular Weight Distribution Dependence of Properties by Blending Experiments, 149
Wissbrun, K. F.: See Agrawal, P. K.
Worth, R. A.: The Application of Statistical Theories of Rubber Elasticity to Polymer Melts, 493

TRANSACTIONS OF THE SOCIETY OF RHEOLOGY
Journal of Rheology

Contents
Volume 21, 1977

ISSUE NO. 1

J. L. WHITE, S. CHANKRAIPHON, and Y. IDE: Rheological Behavior and Flow Patterns Around Agitators in Polymer Solutions 1

R. L. CRAWLEY and W. W. GRAESSLEY: Geometry Effects on Stress Transient Data Obtained by Cone and Plate Flow 19

R. W. FILLERS and N. W. TSCHOEGL: The Effect of Pressure on the Mechanical Properties of Polymers 51

A. A. KHAN and C. D. HAN: A Study on the Interfacial Instability in the Stratified Flow of Two Viscoelastic Fluids Through a Rectangular Duct . 101

M. MATSUI and D. C. BOGUE: Studies in Non-Isothermal Rheology 133

K. F. WISSBRUN: Non-Uniqueness of Determination of Molecular Weight Distribution Dependence of Properties by Blending Experiments 149

NOTES

R. E. COHEN and Y. SAWADA: Extension of the Contour Plotting Method for Representing Linear Viscoelastic Loss Properties of SBS Triblock Copolymers 157

ISSUE NO. 2

R. M. CHRISTENSEN: A Thermodynamical Criterion for the Glass-Transition Temperature 163

R. O. MASCHMEYER and C. T. HILL: Rheology of Concentrated Suspensions of Fibers in Tube Flow. II. An Exploratory Study 183

R. O. MASCHMEYER and C. T. HILL: Rheology of Concentrated Suspensions of Fibers in Tube Flow. III. Suspensions with the Same Fiber Length Distribution 195

F. W. AHRENS and C. GOLDSTEIN: Viscous Dissipation in the Flow Between Eccentric Rotating Disks (Orthogonal Rheometer) 207

H. KOMATSU, M. TAKAHASHI, and S. FUKUSHIMA: Viscoelastic Properties of Water-in-Oil Cream 219

K. M. BAID and A. B. METZNER: Rheological Properties of Dilute Polymer Solutions Determined in Extensional and in Shearing Experiments 237

D. ACIERNO, F. P. LAMANTIA, B. DE CINDIO, and L. NICODEMO: Transient Shear and Elongational Data for Polyisobutylene Melts 261

M. MATZNER, A. NOSHAY, and J. E. MCGRATH: Effect of Hard Segment Chemical Structure on the Processibility of Organo–Siloxane Block Copolymers 273

R. D. MHASKAR, Y. T. SHAH, and J. R. A. PEARSON: On the Stability of Flow in Channels with a Moving Boundary: The Mold Filling Problem . 291

ISSUE NO. 3

J.-M. CHARRIER and Y. K. LI: Large Elastic Deformation Theories and Unstable Deformations of Rubber Structures: Thick Tubes 301

R. N. SHROFF and M. SHIDA: Significance of Predicting the First Normal Stress Difference and the Dynamic Moduli from the Steady-Flow Viscosity ... 327

M. TAKAHASHI, T. MASUDA, and S. ONOGI: New Critical Tests for Integral Constitutive Equations 337

P. K. AGRAWAL, W. K. LEE, J. M. LORNTSON, C. I. RICHARDSON, K. F. WISSBRUN, and A. B. METZNER: Rheological Behavior of Molten Polymers in Shearing and in Extensional Flows 355

H. MARKOVITZ: Boltzmann and the Beginnings of Linear Viscoelasticity .. 381

J. L. SCHRAG: Deviation of Velocity Gradient Profiles from the "Gap Loading" and "Surface Loading" Limits in Dynamic Simple Shear Experiments .. 399

R. S. SHARMA, V. SESHADRI, and R. C. MALHOTRA: Effect of Polymer Additives on the Process of Transition 415

R. N. SHROFF, L. V. CANCIO, and M. SHIDA: Extensional Flow of Polymer Melts 429

NOTES

D. V. BOGER and R. R. HUILGOL: Interpretation of Exit Pressure Measurements 447

ISSUE NO. 4

Presentation of the Bingham Medal to Lawrence E. Nielsen v

T. MATSUMOTO and D. C. BOGUE: Non-Isothermal Rheological Response During Elongational Flow. 453

V. J. KREMESEC and J. C. SLATTERY: The Apparent Stress-Deformation Behavior of a Dilute Suspension of Spheres in a Power Model Fluid 469

R. A. WORTH: The Application of Statistical Theories of Rubber Elasticity to Polymer Melts 493

D. V. BOGER and R. BINNINGTON: Separation of Elastic and Shear Thinning Effects in the Capillary Rheometer 515

M. E. FEWELL and J. D. HELLUMS: The Secondary Flow of Newtonian Fluids in Cone-and-Plate Viscometers 535

Abstracts from the *Journal of the Society of Rheology, Japan* 567

Author Index 603

Volume Title Page i

Volume Contents iii